Installation and Commissioning Organization

Detector Integration and Installation Coordinator

Jim Christenson

Commissioning Coordinator

Jonathan Kotcher

(started 5/99, moves to FNAL 9/99)

- detector installation in DØ assembly hall
- hardware integration
- advisory role in final subdetector fabrication

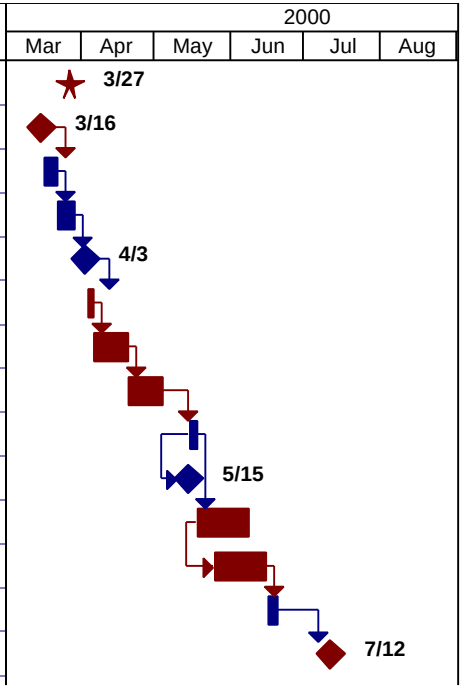
- establish/implement plan for bringing up experiment
- prepare system tests/ readout for hookup
- readout/shakedown of full detector prior to beam

Develop and implement integrated program for delivering detector

Installation Sequence

Current Configuration: Solenoid/CPS Installed, ECS off platform, End Toroids on sidewalk

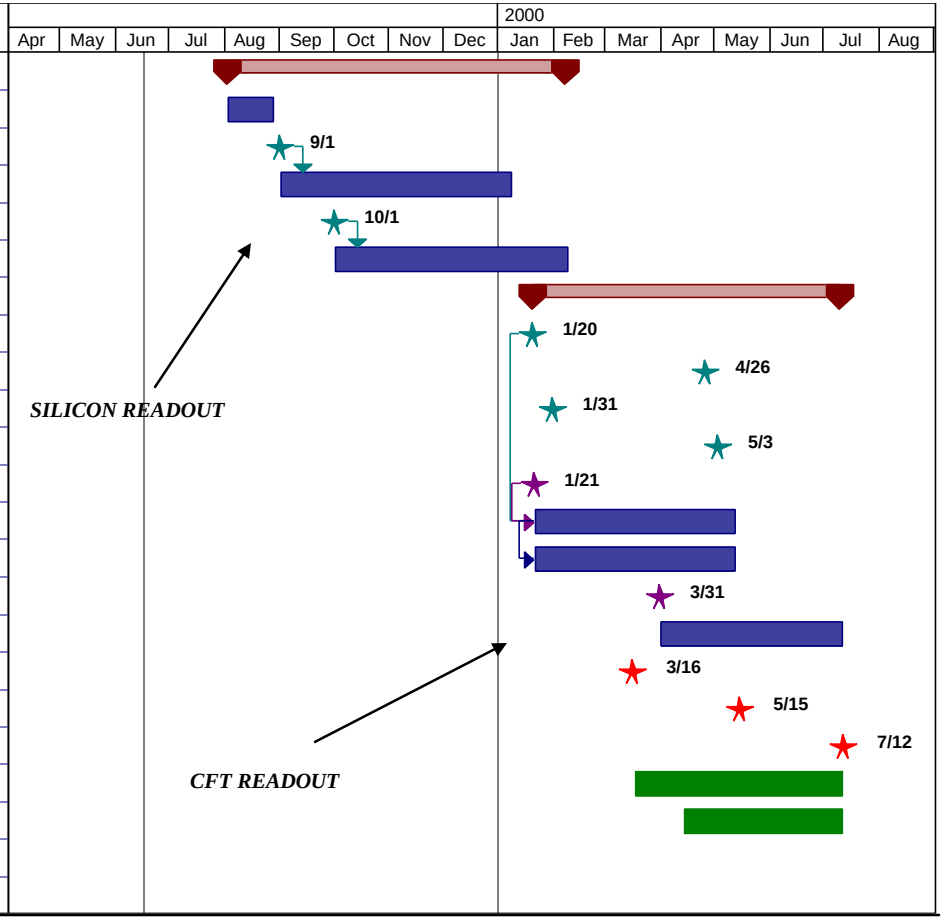
ID	Task Name	Duration	Start	Finish
1	Forward A and B-Layer Muon Detectors Installed	0 wks	3/27/00	3/27/00
2	M2-Tracker Installed in Solenoid	0 wks	3/16/00	3/16/00
3	Move ECS Calorimeter onto Platform	0.6 wks	3/17/00	3/21/00
4	Move Platform West	1 wk	3/22/00	3/28/00
5	M2-Muon End Toroids Installed on Platform	0 wks	4/3/00	4/3/00
6	Move Platform East	0.4 wks	4/4/00	4/5/00
7	Mount B-Layer South MDT Octants Onto Supports	2 wks	4/6/00	4/19/00
8	Mount B-Layer South Pixel Octants Onto Supports	2 wks	4/20/00	5/3/00
9	Remove Shielding Wall	0.6 wks	5/15/00	5/17/00
10	M1-Ready to Roll-in	0 wks	5/15/00	5/15/00
11	Assemble/Install North EMC	3 wks	5/18/00	6/7/00
12	Assembly/Install South EMC	3 wks	5/25/00	6/14/00
13	Roll Detector into Collision Hall	0.4 wks	6/16/00	6/19/00
14	M1-Detector Rolled-in and Hooked Up	0 wks	7/12/00	7/12/00



Well-defined series of steps

Tracking Electronics Commissioning

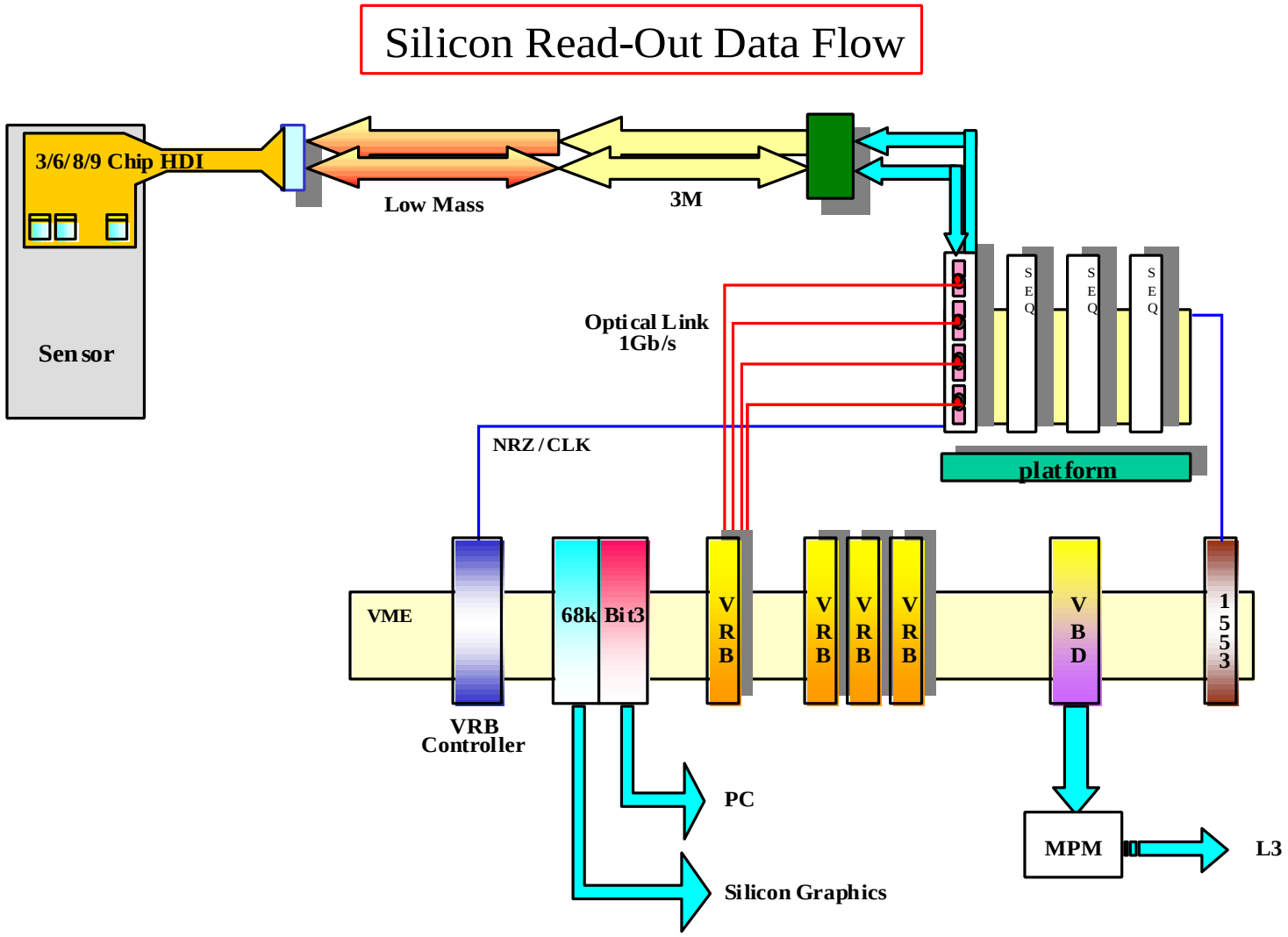
ID	Task Name
1	*TRACKING ELECTRONICS*
2	Commission SVXII emulator
3	VRBs/VTMs ready to install
4	Install/commission VRBs/VTMs
5	Sequencers ready to install
6	Install/Commission sequencers
7	*FIBER TRACKER TRIGGER ELECTRONICS*
8	Initial analog boards available
9	Analog boards complete/tested
10	Initial digital boards available
11	Digital boards complete/tested
12	VLPC Cryostat installed
13	Install/commission front end boards
14	Install/commission mixer boards
15	VLPC cryo system operational
16	Commission VLPCs/CTT with optical pulser board
17	*M2-Tracker Installed in Solenoid*
18	*M1-Ready to Roll-in*
19	*M1-Detector Rolled-in and Hooked-up*
20	*Hookup/commission Fiber Tracker*
21	*Hookup/commission Central Silicon*



SVXII emulator, optical pulsers download MC events, diagnostic patterns:

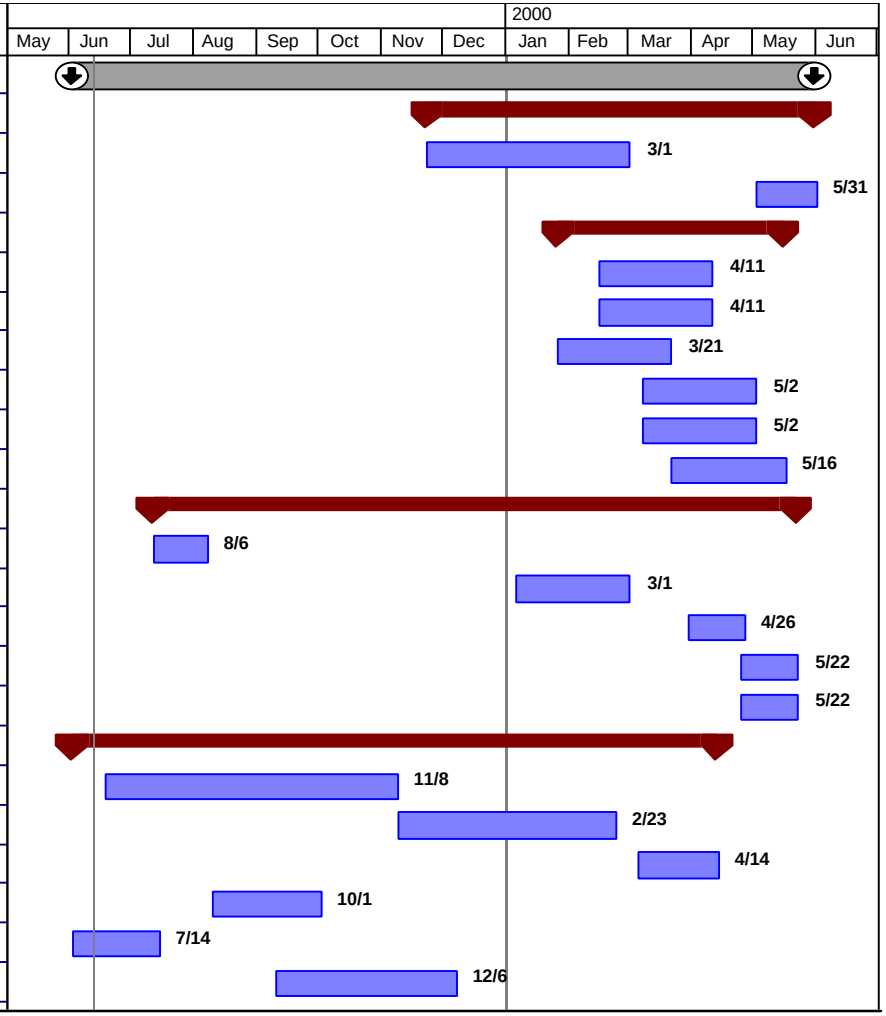
Exercise full front end, all trigger levels

Silicon Data Pathway



Trigger Commissioning Schedule

ID	Task Name
1	**TRIGGER COMMISSIONING**
2	**L1 Trigger**
3	**Assemble/commission L1 calorimeter trigger**
4	**Assemble/commission L1 CTT system**
5	**Muon L1 Trigger**
6	**Test/install/commission MTCxx**
7	**Test/install/commission MTFB**
8	**Test/install/commission MTCM**
9	**Test/install/commission MCEN**
10	**Test/install/commission MCPB**
11	**Test/install/commission MCCM**
12	**L2 Trigger**
13	**Commission L2 framework at Fermilab for 1st user**
14	**Build/commission final global processor system**
15	**Commission Global/Calpp Combination**
16	**Commission L2 Muon**
17	**Commission L2 with CTT, CPS, FPS**
18	**L3 Trigger**
19	**First hardware system test at DZero**
20	**Second hardware system test at DZero**
21	**Install full system**
22	**Implement subdetector unpacking**
23	**Development of first downloadable executable**
24	**Development of first cosmic ray executable**



VLPC Cassette Assignment

- **VLPC cassette:**
  - **1024-channel**
  - **2 FE boards = two 4.5° trigger sectors**
- **Readout boards & crates:**
  - **80 CFT Trigger, 76 CFT Stereo**
  - **10 CPS Stereo**
  - **32 FPS (North, South)**
  - **2 spare cassettes**
- **CPS cassettes integrated with Fiber Tracker**
- **FPS cassette crates spatially located at east, west end of cryostat**